## Biology 0871

## Worksheet on Birds - Chapter 31-2: p806-814

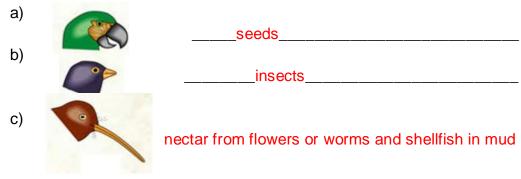
1. What is the most important characteristic that separates birds from reptiles and other living animals?

## **Feathers**

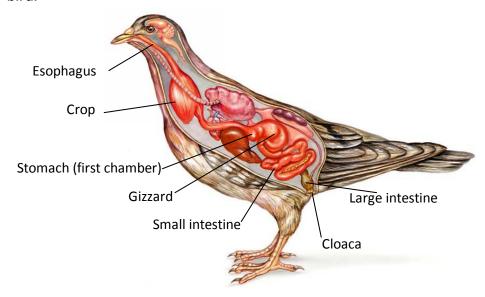
- 2. Give the two main types of feathers and their functions.
  - 1. Down feather: Trap air close to the body and keep the bird warm.
  - 2. Contour feather: Provide the lifting force and balance needed for flight.
- 3. Explain what is an endothermic animal and give two groups of animals that are endotherms.

Endotherms are animals that can generate their own body heat.

- 1. Birds
- 2. Mammals
- 4. Based on their beak shapes, what do these birds probably eat?



5. Identify on the scheme the structures that are involved in the digestion of the bird.



- 6. The complex system of air sacs and breathing tubes ensures that air flows into the air sacs and out through the lungs in a single direction. Why is this single direction air flow system important for the bird? Give three reasons
  - 1. constantly exposes the lungs to oxygen-rich air.
  - 2. maintains a high metabolic rate.
  - 3. provides efficient extraction of oxygen, which enables birds to fly at high altitudes where the air is thin (oxygen poor).
- 7. Complete the sentence about circulation: Birds have a \_4\_\_(number) chambered heart and \_2\_(number) separate circulatory loop(s).
- 8. Complete the sentence about excretion: Nitrogenous wastes are removed from the blood by the <u>kidneys</u>, converted to <u>uric acid</u>, and deposited in the cloaca.
- 9. True are false? Cerebrum of birds is considered large, and their cerebellum is also well developed. \_\_True\_\_
- 10. What makes the bird bones lightweight? \_\_\_\_Air spaces\_\_\_\_\_
- 11. Complete the sentence: Most mating birds press their \_\_\_cloacas\_\_ together to transfer sperm from the male to the female.
- 12. Complete the sentence: Like reptiles, birds have \_\_\_amniotic\_\_ eggs.